

**ABSTRACT**

A persistent archive of a collection of data objects comprises a self-describing, infrastructure-independent representation of a logical structure for the collection and a  
5 self-describing, infrastructure-independent representation of the data objects. The archive is persistent in that it may be instantiated at an indefinite point in time in the future regardless of the state of technology at that time. A knowledge-based persistent archive of a collection of data objects comprises the foregoing two elements but also a self-describing, infrastructure-independent representation of knowledge  
10 relevant to the collection. Another embodiment of a knowledge-based persistent archive comprises at least one representation of a collection or the data objects, at least one self-describing, infrastructure-independent, or executable specification of one or more transformations relevant to the collection, and at least one self-describing, infrastructure-independent, or executable specification of one or more  
15 rules relevant to the collection.